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EXAMINER	
WOODS, ERIC V	

ART UNIT	PAPER NUMBER
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/774,797	IGARASHI ET AL.	
	Examiner	Art Unit	
	Eric Woods	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,15-18,20-22 and 24-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,15-18,20-22 and 24-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Note that the objections to the priority claim with respect to the following claims are being made **FINAL**. Note also that such requirements are to the sufficiency of disclosure and are thusly tied in with 35 USC 112, first paragraph, and thusly are properly subject to review by the Board of Patent Appeals and Interferences.

However, an objection to a priority claim (and denial thereof) does not rise to the level of grounds of rejection per se. Thusly, a claim that has been twice denied a priority claim for lack of sufficiency of disclosure within the parent application has **not** been twice rejected in the sense required by 35 USC 134(a), and this action is not subject to review **until prosecution closes**; it is also *not* reviewable under 37 CFR 1.181. Such actions are **only** reviewable under 35 USC 134 *supra*, and then only after an action that has closed prosecution (e.g. the claims are under final rejection).

Next, attention is drawn to the patent issued on the parent of this divisional application. In that patent, the term "speed" is used to define the rate of movement **of an input device** where such an input device is under **user control** for navigating a **content space**.

The CAFC recently issued an *en banc*, precedential decision in *Phillips v. AWH Corp.*, No. 03-1269, slip op. (Fed. Cir. 2005)(2005 U.S. App LEXIS 13954). This decision stated *inter alia* that dictionaries and external evidence in a case do **not** dominate or control (see for example page 19, "We have viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to

read claim terms, for several reasons." See Section C, page 23, first paragraph, "...However, while extrinsic evidence 'can shed useful light on the relevant art,' we have explained that it is 'less significant than the intrinsic record in determining the legally operative meaning of claim language'..." Therefore, in light of *Phillips*, the definition in applicant's specification will be treated as controlling – in this case speed is defined as stated above, where applicant's specification supports this definition in 11:3-8.

This is relevant because applicant is redefining the term "speed" for the instant application. The statements in for example 11:3-8 constitute applicant acting as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, where the written description clearly redefines the claim term and sets forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

Therefore, this serves as additional proof that claims 1-26 should all be denied domestic priority, since they are redefining the term 'speed' from the parent application, and that they should all be given the filing date of the instant application rather than its parent.

Response to Arguments

Applicant's arguments, see Remarks pages 1-10, filed 2 December 2005, with respect to various items have been fully considered and are persuasive in some regards.

The objection to the IDS stands withdrawn in view of applicant's submission of the Bederson *et al* document.

All rejections against claims 13-14 and 19 stand withdrawn since these claims were canceled.

The objections to the priority claims are partially withdrawn, particularly with respect to claims 13, 14, and 19, since there is no support in the priority document for them, and applicant has canceled those claims.

Applicant's response is **non-responsive** in the sense required by 37 CFR 1.111(a) and (b) because they do not address each and every requirement made by examiner.

Applicant did not correct the title, nor respond to examiner's requirement to provide a new title.

Applicant further did not correct the abstract.

The objections to the specification regarding issues of compliance with 35 USC 112, sixth paragraph, stand withdrawn, since applicant has pointed out and distinctly claimed which elements, steps, and structure correspond to which means. This statement by applicant serves as an **EXPLICIT** disclaimer of claim scope under the doctrines set forth in *Festo* III and V. It further acts to create a prosecution history estoppel in all further prosecution and is regarded as a disclaimer and waiver of such arguments in any further proceedings involving the instant application and/or its progeny. Such designations of matching structure and form under 35 USC 112, sixth paragraph, are thusly stipulated as both fully limiting and controlling in prosecution

before the Board and CAFC. Thusly, any lines of argument involving the definitions of such terms in front of the Board with regards to the affected claims are and have been waived.

Applicant's contention in section II(C) that the application is a properly filed divisional is not correct. A divisional application has the **SAME SPECIFICATION** as the parent application, and **DOES NOT ADD NEW MATTER**.

Further, examiner simply does not find applicant's arguments concerning the sufficiency of disclosure to be adequate. Note for example the admission on Remarks page 7, section VII(A) where applicant **EXPLICITLY** states that "at the time of the invention it was well known in the art that vehicles contain a speedometer and an odometer, as these devices are legally required on cars." That statement does **NOT** address examiner's previous contention that those claimed elements are not disclosed. It does not matter what may or may not be legally required on a vehicle; in any case, applicant has argued that the term 'vehicle' should be interpreted more broadly than cars anyway (Remarks page 3, section V(A)). The proper question is and remains: what does the specification actually disclose? Features that may be legally required on one vehicle are not required on another ... in any case, this only serves as additional proof that applicant is aware that the specification is not enabling and requires undue experimentation.

In response to the "Definitions" section, examiner submits that it is moot because the claims in dispute containing the disputed term 'interval' have been canceled. Examiner further does not find any support in the specification in the cited passages for

applicant's argued definition of the term 'interval'. The specification does support that the gas pedal may be used as an input device, but nowhere in the cited passages is the term 'interval' used, nor is the context defined by examiner discussed therein.

Examiner does concede the point raised by applicant in section V(A) that a car is a type of vehicle. However, examiner contends that applicant's recitation of a specific type of vehicle (a car) without ever using the term 'vehicle' elsewhere supports the rejection under 35 USC 112, first paragraph, under *In re Wands*, because all of applicant's arguments have been directed to the manner in which a car might be used or configured (see sections V(B) and V(C)) to operate with such a system. The term 'vehicle' is very broad, and incorporates watercraft, aircraft, bicycles, and the like, which in any case are not legally required to have the specified equipment. Applicant's specification is **not** enabling for the wider definition of the term 'vehicle' and thusly examiner does not concede applicant's point.

Examiner further does not agree with applicant's analysis in section V(B) that **a person of ordinary skill in the art at the time the invention was made** (POSA) would know how to make and use the invention. First of all, one must examine the POSA – one would conclude that the myriad of possible manners in which the invention could be implemented. Applicant further states in section V(C) that the standard for enablement is not whether or not the claimed invention is impractical. Examiner is entirely aware of that. However, the only referenced portion of the instant specification that refers to using the gas pedal does **not** provide a method for **safe operation of a vehicle** while using the gas pedal to control such a display. Obviously, such a car

would be operated by pressing on the gas pedal, and the use of the pedal to control a vehicle navigation system interface would have obvious implications and effects upon the vehicle's operating speed. As such, the vehicle would be unsafe for operation. Applicant's claimed invention would require undue experimentation. Examiner points out that car navigation systems are well known to utilize methods involving the speed of the vehicle per se (as noted in the specification of the alleged parent application on page 17) to automatically scale maps (see references of record). However, applicant's argumentation and **definition of the term interval** as discussed above prove that applicant is **not** relying on the speed of the vehicle per se but rather the height of the gas pedal itself, which would inherently require undue experimentation.

Examiner further contends that a POSA would not necessarily assume or know that a road map included a topographical view or an aerial map. Standard road maps are purely two-dimensional and do not include such data, contrary to applicant's assertion in section VII(B).

Examiner still contends that the specification is not enabling for the speedometer and odometer, since such is not stated in the specification *per se*. (Section VII(C)).

The rejections of claims 1-12, 15-18, 20-22, and 24-26 under 35 USC 112, second paragraph, for various grounds all stand withdrawn in view of applicant's amendments.

The objections to the drawings do **not** stand withdrawn; they do not show the claimed subject matter as required.

Next, section X does not differentiate how the amendment overcomes the prior art of record.

However, in view of the substantial amendments to the independent claims, all rejections of claims 1-12, 15-18, 20-22, and 24-26 as unpatentable under 35 USC 103(a) stand withdrawn.

New grounds of rejection follow below.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The abstract of the disclosure is objected to because it does not describe the invention. There is nothing related to vehicles, navigation systems, or the like in the abstract. Correction is required. See MPEP § 608.01(b).

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Speed-Dependent Zooming for Vehicle Navigation.

Drawings

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing.

Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

The instant drawings are not sufficient, as they show none of the claimed subject matter.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed features must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Definitions

The term "interval" in claims 13 and 14 is being interpreted by examiner as meaning a) a certain speed range of the vehicle or b) a certain distance traveled by the vehicle in a certain time (e.g. the dictionary definition for speed). If applicant wishes to dispute this, applicant must point out where in the specification there is support for an alternate definition. Examiner has been unable to locate another definition.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

To initially summarize: All claims are rejected under 5 grounds under 112 first paragraph:

1. Lack of written description
2. Scope of enablement
3. Enablement
4. New matter
5. Undue experimentation

Claims 1-12, 15-18, 20-22, and 24-26 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for displaying a map, does not reasonably provide enablement for a component that receives speed information relating to a movement of a vehicle. Examiner believes that the specification may not be enabling for a navigation component that modifies the scale of the map display area in response to the speed information. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make

and/or use the invention commensurate in scope with these claims for at least the following reasons.

Further, claims 1-12, 15-18, 20-22, and 24-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, the specification never uses the term 'vehicle' outside of the claims. **The claims and the specification do NOT enable the use of the broader language 'vehicle**. Since the specification never uses the term vehicle (other than to say a car), it is clear that applicant has given the term 'car' as a specific species of the genus 'vehicle'. Applicant is not entitled to claim a genus unless there is specific support for, and the specification is fully enabling for that genus (As an example of this, the CAFC recently held in *LizardTech Inc. v. Earth Resource Mapping Inc.,* 76 USPQ2d 1724 (CA FC 2005 that claims are not *prima facie* invalid if the specification only provides one embodiment. **HOWEVER**, when the claims are broad enough that they read on the genus – *LizardTech*, method of creating 'seamless array of DWT coefficients' generically was found to be invalid because the specification only provided **one** method of creating such seamless transitions (e.g. only provided the one species), and thusly the claim for the genus or generic was found to be invalid. To quote from the BNA case summary:

Patentee cannot always satisfy requirements of 35 U.S.C. §112, in supporting expansive claim language, merely by clearly describing one embodiment of claimed invention; in present case, specification of patent for method of digital image compression using discreet wavelet transforms, which discloses single method of creating "seamless" DWT, does not entitle inventor to claim any and all means for achieving that objective.

Thusly illustrating the point that applicant is not entitled to claim 'vehicle'.)

The specification does not expressly define 'vehicle' nor does it provide a standard for such. Given that, the guidance in *AWH v. Phillips* that the intrinsic record should be the primary source of the definition for a term does not hold, since the intrinsic record provides no guidance, except providing an example of a species. As such, external source of information (e.g. dictionaries) can therefore be used to construe the term. This process does not violate the chain of consultation that *AWH v. Phillips* established such that dictionaries are being consulted secondly, thusly not following the overruled precedent of *Texas Digital*.

A standard dictionary (American Heritage College Dictionary) defines vehicle as follows: "A device or structure for transporting persons for things; a conveyance".

Since a vehicle may include a bicycle, horse-drawn cart, etc., the specification is clearly not enabled for the above, since they would have no speed indicator or odometer (and would not be legally required to have one).

Therefore, all such claims involving a vehicle in the instant application should be held as invalid, not enabled, lacking written description, and indefinite.

There is only one sentence in the entire specification that could reasonably be construed as providing enablement for this embodiment, and that is found on page 16, lines 20-24. The first sentence describes showing a map on display in a car, providing enablement for the display. However, the second line only hints at how such a speed relationship would be derived, e.g. "the input provided can be the speed at which the driver is driving", implying that this measure would be derived from the amount of force exerted on the gas pedal.

The problem with claim 1 lies in the fact that the specification (and indeed, the prosecution history for the patent issued for the parent of the divisional applicant) supports only the definition where speed is defined in terms of an input by the user (in Figures 2-4 where the speed-based scaling is demonstrated, and in Figure 6 where a chart showing the desired interrelationship between scaling and speed of navigation is shown.

Next, the dependent claims provide claims for which there is simply no basis for enablement whatsoever; see for example claims 4 and 5. There is no mention of a speedometer or odometer in the specification. There is no mention of an aerial map or a topographic map in the specification as per claim 11. There is nothing in the specification to support any kind of relationship between the speed **of a vehicle** and the scale of the map per se. There are many other failings in these claims, but it is sufficient to prove that the independent claims are not enabled as per above.

Further, all claims (e.g. claims 1-12, 15-18, 20-22, and 24-26) stand rejected under 35 U.S.C. 112, first paragraph, as requiring undue experimentation as per *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)(see MPEP 2164).

First of all, the scope and breadth of the claims are not commensurate in scope with the recited claims. The specification does not provide any relationship between how such a system should be made. Applicant appears to argue (or assume *arguendo*) in the specification that car navigation systems and the scaling methods of applicant are well known. Examiner will, for purposes of this rejection only and only for the first action, accept that assertion in order to proceed with the rest of the analysis required under *In re Wands* (see MPEP 2164.08). Still, the art in this area is not crowded. The specification does not assert or show any methods for interconnecting such a system with the instant application, and it would require a great deal of work to engineer such a system (the mechanical sensor would have to be integrated with the navigation system, software would have to be written, etc.) The paucity of evidence in the instant application is quite daunting. There is simply nothing there to support that implementation. No specific examples of how to make such a system in the context of a car navigation system are provide, no working examples or embodiments are provided, and lastly applicant is relying one assertion within the specification.

The inventor provides no working examples and no direction on how to make and/or use such a device. Therefore, both the **direction provided by the inventor** and the **working examples** tests under *In re Wands* are failed. Questions concerning the prior art will for the moment be set aside because the evidence provided by the other

factors under the *In re Wands* standard and tests are sufficient to overcome any evidence from the prior art.

Examiner asserts that a substantial amount of experimentation would be needed to make the invention for at least the reasons set forth above.

Next, the level of ordinary skill in the art would be determined. One of ordinary skill in the art of document navigation interfaces (as per the parent application)(the working examples being prime evidence here) would not, per se, have experience with vehicle navigation interfaces and the **much stricter operational criteria** for such interfaces because of the need for near-real-time responsiveness, requirements not to distract the operator of the vehicle and cause a crash, the much stricter regulatory requirements, and many other levels of evidence.

Therefore, after all analyses have been completed, the rejection of the instant claims under 35 U.S.C. 112, first paragraph, for undue experimentation under the *In re Wands* standard stands.

Finally, applicant clearly suggests using the gas pedal as a user interface for controlling the speed and/or scaling of the map (see 15:21-24). This combination – while perhaps not being inoperative – although examiner asserts that such a combination would in fact be inoperative for practical reasons – would be almost useless in real-world application, because a driver that uses the gas pedal as a control interface would be constantly varying his speed **merely to render the navigation system operable**. Given that heavy traffic is typical in cities and rush hour situations, the navigation system would behave at best in an unpredictable manner and would at

worst simply be unusable because of all the stop-and-go driving and constant increases and decreases in speed because of red lights, traffic control devices, traffic in general, and the like.

It is pointed out (for purposes of appeal) that the **only** embodiment even remotely mentioned in the specification is using the gas pedal as the navigation instrument, and that such an embodiment would also (most likely) never be approved by regulatory authorities because it would be so dangerous for use in the real world and would be so likely to cause wrecks and the like, given how recent studies have shown that driver distraction is at least a contributing factor in the majority of all wrecks in the United States. Finally, again, the use of the gas pedal as an interaction mechanism simply is impracticable and is **not** enabled by the disclosure in any case.

Also, claims 2-11, 13-23, and 24-26 are rejected as failing to corrected the deficiencies of their parent claim(s).

Claims 1-12, 15-18, 20-22, and 24-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, for all the reasons above, all the claims are not supported by the specification.

However, even should the one sentence in the specification be regarded as broadly enabling for the independent claims, the following specific rejections of dependent claims still will stand.

Claims 4-5 are rejected because there is no mention of a speedometer, odometer, or the like in the specification.

Claim 11 is rejected because there is no mention of a topographical map and/or an aerial map; there are not working examples or direct mention of a road map.

Claims 1-12, 15-18, 20-22, and 24-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, the application only hints at how a map would be handled by the instant claims – there are precisely three lines directed to this. There is no mention of level of text detail with respect to a map. The specification does not support and does not **suggest WHATSOEVER** that a level of text detail be controlled by the speed of the vehicle. Indeed, only the scale of a map is supported, where that merely represents the zoom factor of such a map based on the speed.

The specification is not enabled whatsoever for a level of text detail being correlated to the level of text detail. Indeed, the phrase 'level of text detail' per se is not found in the instant specification, and further it is certainly never referred to in the context of a vehicle. Applicant is limited by what the instant specification discloses or what is inherent to it, not what might be obvious or suggested based on the contents of the specification. Those changes (e.g. what might be obvious) would have to be filed in

a CIP, not a divisional. In any case, the instant specification in no way suggests or supports the notion of **level of text detail of a map**. It might support the idea of level of text detail on a generic document (see Figures 2-8), but never provides or illustrates such on a map.

Notes

Claim 24 is a means plus function claim performing the same steps as claim 1, where the system in step 1 has elements that correspond to the recited 'means' of applicant. As stated above in the rejection of the claims under 35 U.S.C. 112, first and second paragraphs, it is unclear precisely what applicant is reciting. As such, examiner will treat the claims as requiring a system that performs the recited method claims; e.g. any reference that meets the limitations of claim 1 will also teach claim 24. Examiner will use this interpretation until such time as applicant's representative contests it. Therefore, the rejection of claims 1 and 24 are bound together. Additionally, a system that performs the limitations of claim 1 will also meet the limitations of claim 12, which will be briefly discussed as an addendum to the rejection of claims 1, 12, and 24 together. This is not found to dictate the CAFC's dictum that means plus function claims be treated differently, since applicant has clearly pointed out that the required structure is the same as the recited system claims since they both find support in the same place in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 12, and 24 are rejected under 35 U.S.C. 103(a) by various references, as set forth below. Two rejections of the independent claims will be made to emphasize the point. There are no common assignees or inventive entities (as relevant) for any references used as eligible, therefore no bars under 35 U.S.C. 103(c) exist in this particular case.

Claims 1, 2, 4, 6, 11-12, 16-18, and 24-25 are rejected under 35 U.S.C. 103(a) as unpatentable over Sievers et al (US 6,163,752)('Sievers') in view of Rosenquist (US 5,864,305) and DeLorme et al (US 5,948,040).

As to claims 1, 12, and 24:

A navigation system comprising: (Sievers – abstract discloses a vehicle navigation system; see also 1:10-45.)(Rosenquist – navigation system for cars shown in Abstract,

Figures 3A-3C, Figure 5, and discussed in 2:20-3:45, where system also provides traffic information and the like)(DeLorme abstract, Figure 9B)

-A display for displaying an area of a map; (Sievers – Figure 1 shows element 7, which is clearly a display device as per 4:5-22, and it is made clear in 4:35-55 that a map is shown on the display, and further that such display scales the map, which would prima facie require that only an area of the map be shown (also, it would be inherent, given the finite size of the display device). See also 2:40-60, where prior art is disclosed that performs the recited limitations)(Rosenquist shows such a display in Figures 3A-3C and 5)(DeLorme 2:1-20,10:35-60, 12:35-50, particularly 15:25-30)(DeLorme Figure 9, 48:8-20, and the like)

-A component that receives speed information relating to movement of a vehicle; and (Sievers -- obviously, the system of 2:40-65 must clearly have a component that determines speed in order to change the display based on speed. Clearly, in 3:40-60 the system has a function to measure speed since it both alters map scale and map refresh rates based on average speed, and this obviously requires some kind of component to measure speed.)

-A navigation component that modifies a level of text detail of a map display to a fuser of the vehicle as a function of the speed information wherein as speed of the vehicle increases the level to text detail decreases, and as speed of the vehicle decreases the level of text detail increases. (Sievers shows this limitation in 3:19-40, where the display is altered based on vehicle speed, where further, 2:40-60 teaches that the map is shown at a high resolution and a higher scale when the vehicle is operating a low

speeds (e.g. 1:10,000) but uses a much lower resolution when operating at high speeds (e.g. 1:100,000). This therefore shows that the level of detail generally decreases when the speed of the vehicle increases, and the level of detail increases when the speed of the vehicle decreases. Additionally, please note Figure 5, and 6:26-28, where the limitation of changing the scale of the map as a function of vehicle speed is expressly recited)(Rosenquist clearly teaches altering the detail level (Abstract) of the display to include more detailed data – in Figures 3A-3C this is shown, where the first level provides only a symbol is overlaid on the map (Figure 3A), where in the second level both the symbol and a traffic sign are shown on the display (Figure 3B), and the third level displays the actual full text of the information. In any case, clearly both symbols (e.g. a generic symbol, and a symbol representing a traffic sign) are text information; that is, they are represented by characters within a font or similar system for rendering and scaling purposes and are part of a character map. They clearly qualify as 'text information'. Now, the system of Rosenquist provides more useful information, where (8:1-10, 8:45-53, 8:60-9:1, 9:7-9:11, 9:20-96) the system of Rosenquist automatically updates the information as the car moves. The importance of showing the required information and only showing such information as it is relevant and then immediately removing it is emphasized (8:4-64). The user can filter the relevant symbols so that only the first level information is visible, and then add second level information as required. Next, the filter can be automatically implemented (8:65-9:5) to change the level of detail (Abstract, claim 1))(DeLorme teaches a system that can be provided for mobile, in-vehicle users (15:25-35, Figure 9, etc) which contains information about a

route, including maps at various levels of detail (48:5-46), where the maps are multi-scale and change with requirements (22:6-18). The system of DeLorme allows users to find details of events and locations of interest along a route from one place to another (48:5-46), where the user can calculate an optimal route and then be provided with additional levels of detail within **an area or region circumscribed around a computed route with capabilities for the user to add a selected POI (point of interest)**. This therefore means that additional information would be presented as the scale of the map changed. The user is thusly provided with information such as the location of hotels, campgrounds, restaurants, public safety facilities, and so on.)

Sievers teaches most of the limitations of the instant claim, but does not expressly teach the use of level of text detail on a map. The system of Sievers instead teaches that the map changes level of detail generically based on the speed of the vehicle – see 2:54-64 specifically, where it is specified that at low speeds, as in city traffic, the map scale is enlarged to a scale of 1:10,000, where an intermediate scale of 1:50,000 is provided when the vehicle is operating at an intermediate speed, and a scale of 1:100,000 is used when the vehicle is operating at high speed on a motorway. This therefore teaches that the level of detail of the map is changed in proportion to speed. Next, Sievers further teaches in 4:30-35 and 4:55-60 that the map display update rate may be variable as a function external parameters such as vehicle speed and/or **traffic density**. Specifically, in 4:20-22, current traffic information is taken into account with respect to planning the route. This therefore suggests the system of Rosenquist, which provides real-time traffic information and symbols and icons.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sievers to include the traffic-sensing capabilities and traffic condition display information of Rosenquist in order to increase the effectiveness of navigation and so that the user could visually see the traffic conditions and receive traffic alerts, which would obviously allow better route computation and understanding of travel times whilst navigating a motor vehicle.

Next, Sievers does not expressly teach the concept of text detail, but obviously as the map changes scale more or less detail would be shown based on the map scale. The DeLorme reference clearly teaches that it is beneficial to provide additional information to the user particularly concerning points of interest around the user (e.g. hotels, restaurants, public safety facilities, etc). Therefore, since such items will be shown within a certain radius around a travel path, clearly the information shown would vary at different levels of magnification on the map. The key concept here is that when the level of detail changes, additional information would be provided on points of interest and the like. Clearly, Rosenquist suggests that additional information (the symbol representing the type of traffic condition) be shown when the situation arises and it is necessary in keeping with the teaching: "It is most important that the information arrives in dude time and in that it accurately describes the situation and further that it disappears as soon as possible when the hindrance etc. has been removed" (Rosenquist 9:61-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sievers to include information on points of interest around the travel route of a vehicle since it allows the user to find

desired facilities, etc (18:1-23) and enjoy a trip more often with updated information (special offers, vacancies, etc)(31:40-55) on such facilities. Since obviously providing the user with real-time updated traffic information is beneficial, providing such updated information about facilities along the way would also be optimal.

As such, the concept of varying the level of **text** detail is clearly suggested by Rosenquist as above, where when additional information is required it is provided in a frame along with a symbol, thusly providing additional text information. Further, DeLorme suggests this limitation through the use of multi-scale maps and the fact that information is provided in some area around the travel path and it is updated. Obviously, more information would be shown at greater scales of magnification, thusly another "level of text information" would be provided, since the system of DeLorme can clearly receive **special offers** from various points of interest (e.g. hotel vacancy information, restaurant special information, etc, as cited above) in a wireless manner whilst traveling, thusly meaning that as a POI was zoomed or magnified, additional information would inherently be provided. Therefore, in conclusion, motivation for combining all three references is present as above; they are directed to the same problem solving area (helping the user navigate effectively and providing enhanced and detailed information to facilitate that task) and are analogous art as also established above. That information (special offers) would clearly be text ...

As to claim 12, with the specific, different limitations, very clearly the system of Sievers displays a map area to the user in a vehicle, since Sievers is an in-car navigations system, and clearly Sievers teaches selectively indicating position of the

vehicle on the map display in 3:10-60, where the user can selectively add or remove points of interest so that the more detailed map will be shown when the vehicle is approaching those points. Clearly, this represents 'selectively indicating position of the vehicle on the map area display'. As noted above, the system of Sievers (and the prior art therein) obviously determines the speed of the vehicle (indeed, in 3:55-60, the system refreshes the display based on the speed of the vehicle). Finally, the system of Sievers as above clearly modifies the scale of the map area display as a function of speed as clearly set forth above.

As to claim 24, to specifically address the means plus function limitations of claim 24, the means for displaying a map to the user is the display in Sievers described above (display unit 7, 4:10-30), the means for determining speed information related to the vehicle is the component for determining speed described above, and the means for providing the scale is the processor and memory as well as software described by Sievers (evaluating unit 4 and data memory 5, 4:10-30). These correspond to the elements in the instant specification, since the display is specified to be generic as well as the computer (processor + plus memory). The software is therefore common to both and there are no functional diagrams to require flowchart matching. Finally, the component to determine speed is generic as well. Although there are specific examples provided by applicant in the claims (speedometer, odometer) these are not enabled by the specification and in any case are only example. The sentence in the specification merely refers to the determining the speed of the vehicle, and this is **NOT** provided with

a specific sensor, nor is such claim. Therefore, the measuring component is generic for at least the above reasons.

As to claim 2, the display device showing a map constitutes a graphical user interface or GUI.

As to claim 4, clearly Sievers must provide a speed sensor of some kind, which would suggest a speedometer.

As to claim 6, Sievers teaches in 2:54-65 that in prior art, the scale of the map is inversely proportional to speed, e.g. that at low speeds it has a scale of 1:10,000, at intermediate speeds it has a scale of 1:50,000, and at high speeds it has a scale of 1:100,000 which clearly establishes scaling inversely proportional to speed. Sievers' invention essentially is an improvement upon the German invention cited therein in that it sometimes shows a high level of detail where it deems it more useful to the driver (e.g. when approaching an exit on the freeway at high speed). However, the system of Sievers for the most part operates in accordance with the provided prior art, therefore, it would be obvious for Sievers to use that system and utilize inverse scaling.

As to claim 11, clearly Sievers in 1:8-12 teaches the use of road maps in automobiles.

As to claim 16, Sievers teaches that the map has a maximum scale (and the prior art teaches the same thing (2:5-22), and that it is desired for the operator to have a maximum amount of data at relevant times (3:20-41). Therefore, it would be obvious that since there is a maximum scale factor, there would obviously be a limit as to how

fast an imperfect computer could execute such a rapid scaling operation, so there would prima facie be some hardware- and software-induced lag, wherein the system could not zoom in or out any more than to the maximum and/or minimum resolutions supported by the system, so it would be obvious that coupled with the software- and hardware-based limitations of a practical system, the system has a practical, if unstated, maximum rate of change of the display device.

As to claim 17, clearly the prior art determines a base scale to display the map area, depending on the speed of the vehicle (see Sievers 2:43-58).

As to claim 18, clearly the prior art (and Sievers) change the scale of the map display area as discussed in the rejection to claims 1 and 12 above, and further in 2:43-58.

As to claim 25, Sievers clearly teaches that the prior art has methods for selectively positioning the vehicle on the screen (1:25-57) and Sievers has options such as showing the vehicle in the center of the screen (4:45-65) and the like. IT would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sievers to allow it to incorporate prior art methods of selectively positioning the vehicle on the screen or whatever the exact wording of the claim requires.

Claim 3 is rejected under 35 U.S.C 103(a) as unpatentable over Sievers, Rosenquist, and DeLorme in view of Sanderson et al (US 6,279,906 B1)('Sanderson').

It is well known to one of ordinary skill in the art (and to an ordinary driver of a car) that the amount of acceleration and/or speed is proportional to the amount of force

exerted on an accelerator. Sanderson is directed to a similar problem solving area (e.g. the simulation of the operation of a motor vehicle). Sanderson teaches the use of a video game console with various accessories, including an accelerator pedal -- see Figure 1, with element 14, which constitutes foot pedals. It is well known in the art that these pedals would represent those that are standard in a car, e.g. at least brake and accelerator pedals with additional pedals (e.g. clutch) being optional. It is further obvious that such elements can be used to control various systems, and Sanderson clearly teaches that the video game could conceivably be controlled solely by input devices such as a foot pedal (1:35-50), so therefore it would have been obvious that an accelerator pedal could be used to control the scaling of the map, since the Sievers systems clearly teaches that the user can control the scale of the map and that the user can also adjust control points so that the map scales at the correct locations (see the relevant prior art cited in the Background art of Sievers in addition to the citations in claim 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Sievers reference with the Sanderson reference, since Sanderson teaches that foot pedals can be used as input devices with respect to driving simulations and the like, and it would be obvious to use the force exerted on the accelerator as an input. Examiner also takes Official Notice of the fact that accelerator pedals in cars generate increases in speed in proportion to the amount of force applied as recited in the instant claim. (*Note that this taking was **NOT** challenged in the Response to the last Office Action*. Therefore, such taking has been

conceded by applicant is **NOT** subject to review under 35 USC 134(a) as a final agency action or not; it is not appealable)

Claim 4 is rejected under 35 U.S.C. 103(a) as unpatentable over Sievers, Rosenquist, and DeLorme in view of Pelin (US 3,618,240).

Sievers teaches a system that obviously monitors the speed of the car, but specific methods of measuring the speed are not provided. Pelin teaches that it is well known in the art to couple a speed indicator to the speedometer cable (1:40-50). It would be obvious to use the method described in Pelin to monitor the speed of the vehicle to provide the speed sensor 2 of Sievers. Motivation to combine is provided by the fact that Pelin provides an old and well-known expedient for measuring the speed of a vehicle for navigation purposes (since Pelin also provides such a system).

Claim 5 is rejected under 35 U.S.C. 103(a) as unpatentable over Sievers, Rosenquist, and DeLorme in view of Nimura (5,884,218)

Nimura teaches in 7:53-66 the use of a distance sensor that can be a digital computer coupled to an odometer, which clearly can be used to compute speed (e.g. distance traveled over time (e.g. a specific time interval), which is the definition of speed with respect to a vehicle's frame of reference. Clearly, such a method exists in the prior art – e.g. Sievers teaches in 3:55-60 the use of a refresh rate, e.g. that the position on the display is updated once in a given distance, where the update factor is varied according to the speed of the vehicle. Clearly, such a method at least hints and suggests the use of a distance sensor derived from or coupled with the speed sensor, and it would be obvious that since the relative distance is known (as well as absolute

position, e.g. GPS, which both the systems of Nimura and Sievers have) could be used to compute the speed. IT would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Nimura and Sievers for the reasons set forth above, and the computation of speed in this way is well known in the art.

Claims 7, 9, 10, 15, 20, 21, and 26 are rejected under 35 U.S.C. 103(a) as unpatentable over Sievers, Rosenquist, and DeLorme in view of Boyer (US 6,445,397 B1).

As to claims 9 and 21, Sievers does not expressly teach this limitation but does suggest it, since the map is shown at a magnification of 1:10,000 at low speeds, 1:50,000 at intermediate speeds, and 1:100,000 at high speeds, while Boyer, which teaches a navigation system similar to that of Sievers and is clearly analogous art, teaches linear scaling of a display and that it is proportional to the increase in the rate (see 4:15-55, and particularly 4:35-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Sievers with Boyer, since Boyer teaches that the scaling effect is more effective visually to the user when performed this way (3:55-4:15). The rejection to claim 7 is incorporated by reference to deal with the additional limitation dependency hierarchy as for claim 21.

As to claims 7, 20, and 26, as explained above, the idea of having the speed and scale equal a constant with respect to a constant is not precisely always the case. As shown in Figure 6 of the instant specification, the chart illustrating the relationship between scale and speed has two lines, where those lines cross in the middle –

however, none of those lines go to zero, and indeed lines 604 and 602 never total zero on the graph. It is clear that any lines in the same approximate relationship would produce a constant in the manner recited by applicant. As stated in 4:15-38, Boyer Figure 2 clearly shows a linear relationship with a plateau, where speed and scale would be a constant factor as required in the instant application, and further Boyer teaches that the scale is varied automatically with the speed of the vehicle (1:25-34), as the prior art well teaches. The idea of the constant is implied in that a linear relationship requires some resultant, and very clearly in Figure 2 of Boyer the resultant speed-scale graph certainly resembles that of Figure 6 of the instant specification. Motivation and combination is taken from claim 9 above.

As to claims 10 and 15, Boyer clearly teaches that when the scale changes, the rate curve is reduced, thusly causing the scaling to be proportional to the rate of change of the speed as set forth above (see 4:38-55). Motivation and combination is taken from claim 9 above.

As to claim 11, Boyer teaches the display of a road map in an automobile on display 10, as shown in Fig. 1. Motivation and combination is taken from claim 9 above.

As to claim 16, Sievers teaches that the map has a maximum scale (and the prior art teaches the same thing (2:5-22), and that it is desired for the operator to have a maximum amount of data at relevant times (3:20-41). Therefore, it would be obvious that since there is a maximum scale factor, there would obviously be a limit as to how fast an imperfect computer could execute such a rapid scaling operation, so there would prima facie be some hardware- and software-induced lag, wherein the system could not

zoom in or out any more than to the maximum and/or minimum resolutions supported by the system, so it would be obvious that coupled with the software- and hardware-based limitations of a practical system, the system has a practical, if unstated, maximum rate of change of the display device. Further, Boyer clearly teaches that the system has a maximum scale factor (e.g. plateau) and would therefore logically have a maximum rate of change of the display shown to the operator. Motivation and combination is taken from claim 9 above.

Claims 8 and 22 are rejected under 35 U.S.C.103(a) as unpatentable over Sievers, Rosenquist, and DeLorme in view of Boyer as applied to claim 7, and further in view of Carpendale (Carpendale, M.S.T. "A Framework for Elastic Presentation Space." Ph.D. Thesis. March 1999).

As to claims 8 and 22, the concept of using an exponential function as part of a viewing interface is well known in the art, for example with the use of fisheye lens, see for example Carpendale page 74, where the equation forming the fisheye lens is pointed out. Further, various shapes of foci are shown on pages 74-77. On page 78, the idea of a plateau in the middle of a zoomed region with exponential drop-offs on both sides is shown.

The Carpendale reference is clearly directed to navigation of content space, which is clearly what the vast majority of applicant's specification is directed towards. IT is further directed to at least the same problem solving area, where that area consists of navigating for example maps (pages 118-122 for example). Further, the Carpendale

reference also teaches the idea of having a constant equal to a combination of scale (see for example page 104, and the idea of the circular lens, where the equation of a circle is prima facie equal to a constant). Finally, Carpendale further discusses navigating such an interface and how the various foci are manipulated. It would have been obvious to combine the capabilities of Carpendale with Sievers and Boyer for at least the above reasons, and also the fact that Carpendale provides additional visualization capabilities and other embodiments of scaling (e.g. hyperbolic and other non-linear techniques not discussed in the instant specification) that would obviously prove useful to a viewer of a navigation system.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eric Woods

May 19, 2006

ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER